

DRAFT Special Requirements (Permit Text):

Sulfate

1. The Permittee is required to sample for sulfate at an internal monitoring station established within the wastewater treatment plant (WWTP) at a point located after the permeate streams from the reverse osmosis and the nanofiltration membranes are blended and prior to effluent stabilization (monitoring station WS00X).
2. So that the sulfate concentration as measured at WS00X is representative of the discharge of treated effluent through Outfall SD001, no sulfate may be added to the treated wastewater during the effluent stabilization process (i.e., between monitoring station WS00X and Outfall SD001).
3. The Permittee shall meet an Operating Limit of 10 mg/L sulfate. Compliance with the Operating Limit shall be based on a rolling average of the most recent 12 calendar monthly average sulfate values of monitoring conducted at WS00X. The Operating Limit of 10 mg/L sulfate is defined as a compliance limit; exceedance of this Operating Limit is a violation of this permit.
4. The Permittee shall meet an Operating Target of 9 mg/L sulfate. Conformance with the Operating Target shall be based on the average of all sulfate samples taken at WS00X during the calendar month. The Operating Target of 9 mg/L sulfate is defined as an intervention limit that triggers preventative actions (described in part 5 below) to help ensure the Operating Limit for sulfate is not exceeded. Exceedance of the Operating Target for sulfate is not considered a violation of this permit.
5. If sampling by the Permittee at monitoring station WS00X indicates an exceedance of the Operating Target for sulfate concentration, the Permittee shall conduct the following:
 - a. Provide notification to the MPCA as a comment on the monthly Discharge Monitoring Report.
 - b. Immediately implement investigation and contingency mitigation measures as required by the Sulfate Reduction Evaluation Plan (described in parts 7 and 8 below) to reduce sulfate concentrations below the Operating Target.
 - c. Within 60 days of the exceedance of the Operating Target provide a written report to the MPCA describing the cause of the exceedance, the steps taken to resolve the exceedance and the date at which conformance with the Operating Target was re-achieved.
6. If sampling by the Permittee at monitoring station WS00X indicates a violation of the Operating Limit for sulfate, the Permittee shall conduct the following:
 - a. Notify MPCA in writing within 3 days of receiving results indicating that the Operating Limit for sulfate has been violated.
 - b. Immediately investigate the cause of the violation and take action to prevent further violations.
 - c. Submit a report within 30 days of the violation describing the cause of the violation, the actions that were taken to prevent further violations, and the date at which compliance with the Operating Limit was, or is expected to be, achieved.

7. The Permittee is required to submit a proposed Sulfate Reduction Evaluation Plan (Plan) to the MPCA within 365 days after permit issuance. The Plan shall include, but is not limited to:
 - a. How the Permittee proposes to evaluate the treatment process to ensure sulfate reduction at the WWTP,
 - b. Testing to be performed to diagnose any observed performance issues, and
 - c. A list of contingency mitigation options to restore performance and achieve compliance below the Operating Target in the event the Operating Target sulfate concentration of 9 mg/L is exceeded. The list must include, but is not limited to the transfer of water from RO membranes to NF units or vice versa, the completion of a Clean in Place process, pressure checks of the membrane modules, and replacement of the membrane modules. The Plan must describe the operating conditions or circumstances under which each option would be taken.
8. The submitted Plan shall become a final Plan 60 days after its submittal unless (1) MPCA issues a completeness determination within 60 days stating that the proposed plan is incomplete or (2) MPCA notifies the permittee in writing within 60 days that the Plan requires changes. In the event MPCA finds the Plan incomplete or requires changes, the proposed Plan shall become a final Plan when the MPCA confirms in writing that the deficiencies have been addressed. MPCA may accelerate the Plan becoming a final Plan by issuing written approval of the proposed Plan. Discharge from the WWTP is prohibited until the Plan is final under this paragraph.

Copper

1. The Permittee is required to sample for total copper at an internal monitoring station established within the wastewater treatment plant (WWTP) at a point located after the permeate streams from the reverse osmosis and the nanofiltration membranes are blended and prior to effluent stabilization (monitoring station WS00X).
2. So that the sulfate concentration as measured at monitoring station WS00X is representative of the discharge of treated effluent through Outfall SD001, no copper may be added to the treated wastewater during the effluent stabilization process (i.e., between monitoring station WS00X and Outfall SD001).
3. The Permittee shall meet a monthly average Operating Limit of 9.3 ng/L total copper at monitoring station WS00X. The Operating Limit for total copper is defined as a compliance limit; exceedance of the Operating Limit is a violation of this permit.
4. In addition, the Permittee shall meet the monthly average 0.15 mg/L and 0.30 mg/L daily maximum Technology Based Effluent Limit for total copper at Outfall SD001.

DRAFT Limits & Monitoring Requirements:***Internal Monitoring Station (WS00X)***

Parameter	Limit	Frequency	Limit Type	Effective Period	Notes
Sulfate, Total	9 mg/L	1x week	Calendar Month Average Intervention	Jan – Dec	See Special Requirements Chapter of the Permit for further details.
Sulfate, Total	10 mg/L	1 x week	Rolling Average of Previous 12monthly averages	Jan – Dec	See Special Requirements Chapter of the Permit for further details.
Copper, Total	9.3 ug/L	1 x week	Calendar Month Average	Jan - Dec	See Special Requirements Chapter of the Permit for further details.

Surface Water Discharge Monitoring Station (Outfall SD001)

Parameter	Limit	Frequency	Limit Type	Effective Period	Notes
Copper, Total	0.15 mg/L	1 x week	Calendar Month Average	Jan - Dec	TBEL as required by 40 CFR 440.104 (Subp. J)
Copper, Total	0.30 mg/L	1 x week	Daily Maximum	Jan - Dec	TBEL as required by 40 CFR 440.104 (Subp. J)

Technology Based Effluent Limitations

Minn. R. 7053.0225 subp. 1.A. requires all point source dischargers of industrial or other wastes to comply with applicable federal standards, including those listed in 40 CFR parts 401 through 471. The MPCA has determined the specific industrial categories and federal effluent limitation guidelines applicable to the Facility are those described in 40 CFR pt. 440 Subpart J (Copper, Lead, Zinc, Gold, Silver & Molybdenum Ores Subcategory; Subpart G (Nickel Ore Subcategory); and Subpart K (Platinum Ores Subcategory).

Applicable Categorical Technology Based Effluent Limitations to be applied at SD001

Substance or Characteristic	mg/L		(BAT,BCT,BPJ,BPT,NSPS)
	AVG	MAX	
Copper	0.15	0.30	NSPS, BPT, BAT
Zinc	0.5	1.0	BPT, BAT, BPJ
Lead	0.3	0.6	NSPS, BPT, BAT
Mercury	0.001	0.002	NSPS, BAT
Cadmium	0.05	0.10	NSPS, BPT, BAT
pH	6.0 - 9.0		NSPS, BPT
TSS	20.0	30.0	NSPS, BPT
Arsenic	0.5	1.0	BPT, BPJ